

*REMARKS/ARGUMENTS*

The following remarks are believed responsive to the points raised by the Office Action dated May 7, 2006.

*The Pending Claims*

Claims 1-28 and 30-32 are pending in the application, and claim 29 has been canceled. Claim 1 has been amended to include the limitations of claim 29. No new matter has been added.

*The Office Action*

For convenience, the following remarks will address the rejections in the same order they were raised in the Office Action.

*I. Double Patenting Rejections*

a). Claims 1-28 were rejected on the ground of nonstatutory obvious-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,824,458 to Ensinger (hereinafter referred to as “Ensinger ‘458”).

b). Claims 1-26 were rejected on the ground of nonstatutory obvious-type double patenting as being unpatentable over claims 1-28 of U.S. Patent No. 6,913,669 to Ensinger (hereinafter referred to as “Ensinger ‘669”) and claims 1-22 of Ensinger ‘458.

c). Claims 1-28 were rejected on the ground of nonstatutory obvious-type double patenting as being unpatentable over claims 1-20 of copending Application No. 2004/0259485 (hereinafter referred to as “Ensinger ‘485”).

d). Claims 27 and 28 were rejected on the ground of nonstatutory obvious-type double patenting as being unpatentable over claims 1-26 of Ensinger ‘669, in view of U.S. Patent No. 6,390,908 to Chen et al. (hereinafter referred to as “Chen et al.”).

e). Claim 29 was rejected on the ground of nonstatutory obvious-type double patenting as being unpatentable over claims 1-26 of Ensinger ‘669, claims 1-20 of ‘Ensinger

485, and claims 1-22 of Ensinger '458, in view of U.S. Patent No. 4,390,384 to Turner (hereinafter referred to as "Turner").

f). Claims 30-32 were rejected on the ground of nonstatutory obvious-type double patenting as being unpatentable over claims 1-26 of Ensinger '669, claims 1-20 of Ensinger '485, and claims 1-22 of Ensinger '458, in view of U.S. Patent No. 6,835,125 to Tseng et al. (hereinafter referred to as "Tseng et al.") and the *Materials by Design* excerpts.

Each of these rejections is separately and respectfully traversed.

However, in view of the amendment to claim 1, which incorporated the limitations of claim 29 into claim 1, the double patenting rejections of claims 1-28 and 30-32 set out above in I. a)-d) and f) are moot.

With regard to the rejection of claim 29, set out above in e), none of Ensinger '669, Ensinger '485, and Ensinger '458 claim a retaining ring comprising a carrier ring releasably attached to a bearing ring by a friction welding process.

According to the Office Action, "it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to friction weld the layers of retaining ring together as this form of joining has advantages taught by Turner."

However, there is no teaching or suggestion anywhere in Turner of a retaining ring comprising a carrier ring *releasably attached* to a bearing ring by a friction welding process.

Rather, Turner teaches "an improved method of bonding thermoplastic materials to one another to improve the strength and reliability of the bond" (col. 2, lines 27-29, *see also*, col. 1, lines 37-39, referring to the "critical importance" of "the integrity, reliability and durability of the weld or bond"). In particular, Turner teaches heating the edges of thermoplastic materials to at least their fusion temperatures, forcing the heated edges together to form a welded junction, forming a bead as a result of the pressure of the two thermoplastic materials bearing against one another with the bead being formed along the junction of the weld, and then the weld junction is heated to at least about its fusion temperature and then rapidly cooled to improve the physical properties of impact strength, dielectric strength and flexural deflection of the plastic materials proximate the weld junction (col. 2, lines 38-49).

Thus, Turner teaches a strong, durable weld. There is no suggestion of a retaining ring comprising a carrier ring releasably attached to a bearing ring by a friction welding process.

While the Office Action references the Abstract and column 4, lines 21-66 in Turner, these sections further emphasize the durability of the weld (*see, for example*, col. 4, lines 62-63 referring to the “improved properties of the weld junction”), thus reinforcing the summary of the teachings of Turner discussed above. If anything, Turner, in teaching improving the strength and reliability of the bond, teaches away from a retaining ring comprising a carrier ring releasably attached to a bearing ring by a friction welding process.

Accordingly, it is respectfully submitted that the double patenting rejection is improper, and should be withdrawn.

## *II. Rejections under 35 USC 102 and 103*

- a). Claims 1-4, 6-9, 11, 12, and 20-22 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication 2003/0070757 A1 to DeMeyer et al. (hereinafter referred to as “DeMeyer et al.”).
- b). Claims 1-4 and 7 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,277,008 to Masuta et al. (hereinafter referred to as “Masuta et al.”).
- c). Claims 1-4, 7, and 23-28 were rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al.
- d). Claims 1-4, 6-9, 12, 13, and 20-23 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,251,215 to Zuniga et al. (hereinafter referred to as “Zuniga et al.”).
- e). Claims 10, 11, and 14-17 were rejected under 35 U.S.C. 103(a) as being unpatentable over DeMeyer et al., Masuta et al., Chen et al., or Zuniga et al., in view of U.S. Patent Application Publication 2002/0049030 to Numoto et al. (hereinafter referred to as “Numoto et al.”).
- f). Claim 29 was rejected under 35 U.S.C. 103(a) as being unpatentable over DeMeyer et al., Masuta et al., Chen et al., or Zuniga et al., in view of Turner.

g). Claims 30-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over DeMeyer et al., Masuta et al., Chen et al., or Zuniga et al., in view of Tseng et al and the *Materials by Design* excerpts.

Each of these rejections is separately and respectfully traversed.

However, in view of the amendment to claim 1, which incorporated the limitations of claim 29 into claim 1, the rejections under 35 USC 102 and 103 of claims 1-28 and 30-32 set out above in II. a)-e) and g) are moot.

With regard to the rejection of claim 29, set out above in f), none of DeMeyer et al., Masuta et al., Chen et al., or Zuniga et al. teach or suggest a retaining ring comprising a carrier ring releasably attached to a bearing ring by a friction welding process.

According to the Office Action, “it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to friction weld the layers of retaining ring together as this form of joining has advantages taught by Turner.”

However, as noted above with respect to the double patenting rejection, there is no teaching or suggestion anywhere in Turner of a retaining ring comprising a carrier ring *releasably attached* to a bearing ring by a friction welding process.

Rather, Turner teaches “an improved method of bonding thermoplastic materials to one another to improve the strength and reliability of the bond” (col. 2, lines 27-29, *see also*, col. 1, lines 37-39, referring to the “critical importance” of “the integrity, reliability and durability of the weld or bond”). In particular, Turner teaches heating the edges of thermoplastic materials to at least their fusion temperatures, forcing the heated edges together to form a welded junction, forming a bead as a result of the pressure of the two thermoplastic materials bearing against one another with the bead being formed along the junction of the weld, and then the weld junction is heated to at least about its fusion temperature and then rapidly cooled to improve the physical properties of impact strength, dielectric strength and flexural deflection of the plastic materials proximate the weld junction (col. 2, lines 38-49). Thus, Turner teaches a strong, durable weld. There is no suggestion of a retaining ring comprising a carrier ring releasably attached to a bearing ring by a friction welding process.

While the Office Action references the Abstract and column 4, lines 21-66 in Turner, these sections further emphasize the durability of the weld (*see, for example*, col. 4, lines 62-63 referring to the “improved properties of the weld junction”), thus reinforcing the summary of the teachings of Turner discussed above. If anything, Turner, in teaching improving the strength and reliability of the bond, teaches away from a retaining ring comprising a carrier ring releasably attached to a bearing ring by a friction welding process.

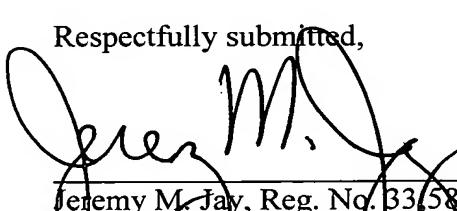
Since the independent claim is allowable for the reasons set forth above, the dependent claims are allowable as they depend from the novel and non-obvious independent claim.

In summary, there is nothing in the cited references that would lead one of ordinary skill in the art to the claimed invention. For the reasons set forth above, reconsideration of the rejection is respectfully requested.

#### *Conclusion*

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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